

Aviation News

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Proposed Helicopter Transport: This drawing of a twin-engine, two-rotor helicopter was submitted to CAB by W. L. Le Page of Platt-Le Page Aircraft Corp. as a design for a practical local service transport. It would carry 12 to 14 passengers at top speed of 140 mph.

President Ambiguous on Air Policy

Advocates "competition" for self-sustaining foreign routes; fails to say if mail subsidy is legitimate income.

Bell Says Army Plane Needs Will Be Met

Replies to Lovett's warning that task of industry is "unprecedented in this or any other country."

Stout Urges Speedy Cargo Planes

Convair aide in interview says air plants could shift to post-war auto production. Predicts 300 mph air freighters.

United, Export Differ On Global Routes

Patterson urges single company operations; Coverdale cites need of government-regulated free competition.

Jet Propulsion Helicopters Seen

High-speed, high-lift rotary wing aircraft studied by west coast companies, survey of 26 projects throughout U. S. shows.

Aircraft Dividend Prospects Normal

Much aircraft income will go into equipment or reserves to meet post-war needs, commentator says.

They'll never see a battlefield...

★—Yet these planes will strike as the enemy just as surely as though they were to blast their way to glory with a thousand bombs... For these are planes in which advanced students are taught the vital art of blood flying... planes in which flyers acquire the "bombs-how" which pays dividends in terms of glorious air victories... All of Howard's facilities are devoted to building vital trainer planes... the NM-1 (war-time edition of the Howard DGA) for the Navy... the PT-23 in which Army cadets are given their first taste of combat tactics... This is our full time job until Victory... after which we look forward to taking our former place among the leaders of a great industry as it spreads its peaceful wings.



Howard AIRCRAFT CORPORATION
CHICAGO AND ST. CHARLES • ILLINOIS

THE AVIATION NEWS

Washington Observer

MCNUTT AND AIRCRAFT WAR PRODUCTION COUNCIL—The name of the National Aircraft War Production Council came up at the news conference of War Manpower Commissioner McNutt. What, asked McNutt, is the Aircraft War Production Council? Never heard of it. A reporter explained. Oh, repeated McNutt, another trade association. The council, with all company presidents in attendance, had just concluded a two-day meeting, widely publicized in Washington papers.

HE DID KNOW, THOUGH—After disclosing knowledge of the council, McNutt then proceeded to indicate that he did know about it and that of his thoughts on the council were highly uncomplimentary and all the round. He did get into the record, however, allegations that the West Coast aircraft companies had asked deferments for everyone in the industry (country to fact), that they tried to block the West Coast manpower program, that they wanted no interference in hiring and at the same time expected the War Manpower Commission to pour workers into their area.

MCNUTT BY-PASSED—It is true that the council did bypass McNutt in attacking their manpower problem. One industry executive when questioned at this point indicated that as far as he was concerned he preferred to deal with somebody who knew something about the manpower problem. It seems that the council and McNutt are agreed on one point. They don't agree.

AIRLINES FINANCE—The airlines, it appears, are going to have an opportunity to see—in an individual basis—what the Civil Aeronautics Board is telling the Army about the financial aspects of their military operations. Directors of the Air Transport Association, who heard recently that CAB was making recommendations on the subject of those operations, learned that the board had sent along figures, but no recommendations. Each carrier is to be allowed by CAB to see the financial data in the report, pertaining to itself, but not those having to do with other carriers.

BICKENBACHER PLEASED—The somewhat adverse report on the position in which the United States may find itself in the post-war aviation picture, made by the group of senators recently returned from a tour of the war fronts,

was a introduction of Capt. Eddie Bickenbacher of Eastern Air Lines. Not because it was adverse, of course, but because it brought forward many of the things the much-traveled engineer has been saying publicly and privately for a long time, particularly the matter of air supply and the need for a definite answer to the question of what is to become of the airbases built by the United States in foreign countries.

BLIMPS—Little published, as is the case of the anti-aeronautics patrol generally, the K-ships Goodyear's blimps, are doing yeoman service, and the Navy is completely sold on them for certain missions and further studies and technical developments are proceeding on blimps as they are no heavier-than-air craft.



So far as is known, only one blimp has been lost on patrol duty and it is understood that one resulted from a peculiar combination of circumstances which probably wouldn't happen again in a life-time and not due to equipment failure. Incidentally, even the best friends of the rigid airships now believe it is not so far as the war is concerned, although they are possibilities for the rigid ships as cargo carriers on long, over-water hauls after the war.



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October 22, 1943

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CHILDRENS APPOINTMENT—Three new, more unified feelings to be smoothed at WPS as a result of the recent appointment of Wendell Childers as WPS representative for the West Coast manpower program. The feelings are not personal and have nothing to do with Childers personally. It is just that the labor representatives at WPS were by-passed when the appointment was made. The labor vice-chairman at WPS feel they already had a set-up to handle such problems and they feel further that they were ignored when the manpower program was being planned. As a result, Joseph Keenan, WPS vice president, says, "Childers, WPS vice-chairman for labor, will be concerned into the operation of the plan. An amendment to this effect may be expected shortly."

"LIBERATOR" BY FORD—Speaking of stigma, station people attending the Black Tie Attack show in Washington did not overlook the fact that the B-34 on display had Ford nameplates. Memory has it that maker's name plates on the outside surfaces have been more or less



forbidden. The Consolidated Willow people, who have more than a passing interest in the L.A. center, being its mother and father, didn't say anything publicly, but privately they said plenty and in this they had plenty of support from the above-mentioned aviation people. With some places more or less taboo, observers here mentioned. In addition, that reports from Detroit indicate that Willow Sun's B-26 production isn't all that it might be.

TRANSPORT PLANES—When post-war aviation is discussed, it is often overlooked that the United States is virtually the only country building transport airplanes in any quantity, with more than 2,000 a passenger and cargo carrier being turned out monthly. A British expert who has been touring the country conceded that the Douglas "Skyraider," a military development of the DC-4, is proving to serve in the case of the most dependable long-range airplanes ever built and that it is a familiar sight on airfields from the American continent east to Russia.

Washington Observer

land, Africa and beyond as well as west across the Pacific. New models are said to have headwing tank capacity increased so that extra internal space can be utilized, space that has been occupied by long-range fuel tanks fitted into the forward portion of the cabin as a necessity for long hauls.

WAR'S END GUESSING—A thoroughly informed person recently returned from abroad says top British airman believes Germany will crumble about the end of the year if the aerial warfare continues in present pace or is accelerated, as it undoubtedly will be. Officers with the ground forces, though, set the date sometime late in 1944.

PLANE LOSSES—This same observer said that 7 to 8 percent of British planes are being lost over Europe and added that he was advised that our own personnel casualties were much higher as the daylight raids, with many of our returning planes carrying dead and wounded.

BATTLESHIP RULES THE SEA?—With qualifications, of course. But Rear Admiral Thomas L. Gatch, commander of the battleship "K", now underfitted as the USS South Dakota, is taking issue with those who say firepower has outmoded the battleship and in support says that "the first action—when the Japs tried to relieve Guadalcanal by superior air power in daytime—proved that the battleship, with proper air coordination, rules the seas."

AIRCRAFT REFUNDS—A survey by two professors of the Harvard Business School discloses that in 1942, eleven leading aircraft manufacturers made an average refund of \$16,600,000 to the government out of earnings as a result of contract renegotiations. The effect, of course, was to reduce working capital, a severe article in the industry.

REALISTIC SCHEDULES—The War Production Board, according to informed authorities, is again revising the aircraft production schedule—the present one being a month old. The new one, "in fact, will actually be realistic and will take into consideration production problems of all kinds which may affect output. The industry has been asking for such a schedule for some time and is hopeful this may be it. Schedule planning still calls for about 115,000 aircraft in 1944 and the best guess is now that the industry will not reach peak production before late summer or early fall next year.

The man who jumped a thousand miles

HE HAS ONLY A FEW HUNDRED FEET TO GO NOW—but he started his jump a thousand miles away. His whole company of paratroopers and their equipment—guns, grenades, ammunition, food, winter-bus, even a special corner—were sped to the fighting front by plane.

The bigger and faster our transport planes, the more paratroopers we can fly into position where they can get the jump on the enemy.

That takes tremendous engine power—and engine power largely depends upon gasoline quality. For assurance of high octane fuel, engines can be designed to produce more power per pound of weight and per gallon of fuel.

Thanks to the pre-war efforts of the U. S. petroleum industry, war plane designers and builders today can make the most of the best. It is burning oak enormous quantities of "fighting grade" gasoline—and to every gallon potent drops of Ethyl antiknock fluid are added to raise high octane ratings still higher, to pack in an extra punch.

Right now we of Ethyl are devoting our plants and people to winning the war, but, like most American business, we are seeking extra time to think it all ahead after the war and how these new and better fuels can be put to peacetime use.



ETHYL CORPORATION
Chevrolet Building, New York City

Headquarters of Ethyl's U. S. and foreign operations
for enhanced quality of aviation and motor gasoline.

President Favors Private Oversea Airlines, But No Pact Is Imminent

Press conference statement indicates even tentative conclusions with England have not been reached.

By BLAINE STURBLEFIELD

President Roosevelt was virtually compelled by public clamor to say something on the international airline question. Though his remarks to his press conference last week were helpful to the industry in looking ahead, he was severely expressing his opinions.

The President, weeks ago, agreed with a Senate group headed by Bennett Clark, Missouri, not to enter into any permanent international airline agreements except in consultation with Congress. Under that plan, Mr. Roosevelt is not at liberty to propose anything at this time.

World Progress Must Wait—Furthermore, the Chief Executive remarks indicate plainly that he has not reached even tentative conclusions on all phases of the problem with Mr. Churchill, to say nothing of the heads of other governments. The United States, as a member of the United Nations, can publish recommendations but cannot promulgate a world program until other members have agreed. Of course it is obvious to all just what Britain and the United States will dominate the world air map in the immediate post-war period.

There are other good reasons why neither the White House nor Congress can make decisions on overseas air routes just now. Much depends on armistice agreements and treaties at the close of the war, and no one knows even how long the war will last. Publication even of tentative agreements might embarrass Allied diplomats and military leaders in various places. Such bland preparations for peace certainly would injure the feelings of peoples still fighting desperately.

Suggest Private Ownership—The President went as far as he could in indicating what the air future may be. He advocated private ownership of overseas lines, and he favored government ownership only of profitable routes to remote or sparsely settled places. By using the word "survivors" (planned) he implied his preference for multiple operating companies, rather than the "single instrument" world system proposed by Pan American Airways and United Air Lines.

Mr. Roosevelt explained his conception of "freedom of the air," a principle which he thought the world should adhere to. In effect, he said that the airlines of one country should pass over and make fuel stops in other countries only by permission of said countries.

(U. S. Senators, chairman of the Aviation Committee on United States Air Policy representing 16 domestic operators, quickly issued a statement saying the President's remarks seemed to support fully the country's denunciation of policy filed with CAB on July 13.)

Hedged on Russia—The President made it plain that he would not favor an attempt by this government to obtain sovereignty over air bases, both by Army and Navy and other Federal agencies in foreign countries.

It is his idea that United Nations may operate many bases for international use, or at least that by agreement they will be internationalized ports.

A new development following the President's statement was American Export Airlines' announcement that company hopes "regulated competition." AEA executives told Aviation News they had always favored competitive operations abroad as well as at home. The policy favored by the domestic group and by AEA, is not actually "close and open" competition. Only a limited number of route certificates will be awarded in any area, and of course the number of foreign flag competition can be limited. On the Atlantic the retail group of foreign operators probably would be the British, the Swedes, the French, and the Dutch, who will be admitted by reciprocal agreement. The "open competition" operators merely hope that they will be among the certified few. They do not believe that all of them will be slaving to death in competition on the Atlantic main-street, or on any other beach road.

Le Page Tells CAB Of Helicopter's Future

Aircraft executive convinced of vast possibilities as new vehicle

By BARBARA FREDERICK

A practical engineer told the Civil Aeronautics Board last week with assurance that the helicopter has vast possibilities as an air transport vehicle.

The witness, W. Laurence Le Page, is president of Patti-Le Page Aircraft, Edgelyne, Pa. His engineering background—he was chief engineer with Sikorski and consulting engineer to Pittman, helicopter producers—and the data he presented at CAB's hearing on feasibility and development gave factual support to his claims.

Drawing Submitted—Asserting that the development of the helicopter has reached a stage where weight and performance of given design can be predicted, Le Page

Hedgehogs Out

Use of heavily armed Fortresses as escort fighters for big formations of B-17's is out, it is understood. The specially modified Forts, which had heavy caliber guns, some in extra barrels, were called KB-40's at Wright Field. As word went out as to bombing targets, when the orthodox Forts were carrying loads, but on the way back the KB-40's were left behind.

submitted a drawing of a two-engine two-rotor helicopter transport he believed would have characteristics useful to the type of service under discussion.

Features are a 12 to 14 passenger capacity, two 400-hp engines for power reliability, although either could drive both rotors at gross weight of 17,000 lb., top speed of 140 mph, with a probable average of 130 to 110 on scheduled service, and operation costs not unlike those of other types of air transport with comparable capacity.

Product of 5 Years' Work—Le Page and his company, working over the last five years, has developed the machine to a point where it will climb vertically faster than 1,000 ft. per min., and climb at 1,500 ft. per min. at a forward speed of 50 to 60 mph. The helicopter, he testified, has been proved as controllable as a ladder as it flies forward, backward and sideways.

Although construction of his proposed two-rotor transport is now too costly an undertaking to consider without supplementary backing from other companies, Le Page said, there is no doubt as to the technical soundness of his design. He said he would be built and tested immediately.

Chicago & Southern Asks for Rio Route

Northeast also asks for purchase of Mayflower Airlines

Chicago and Southern has applied for routes from New Orleans to Rio de Janeiro and Buenos Aires, Argentina, beginning to eight routes it has asked the Civil Aeronautics Board to permit it to fly between that port and points in Mexico, Central and South America and the Caribbean area.

The line would follow a great circle route on the requested route to Rio de Janeiro, via Havana, Brazil, San Cristobal and Mexico, with 1,185 mi. over water and 3,184 over land. To Buenos Aires, it would go via Havana, Balboa, Col. La Paz and Santa, along a great circle route. Of this 1,575 mi. would be over water and 3,241 over land.

Terminals in previous applications are Mexico City, Belhoo, Havana, and Port of Spain, by various intermediate points in Central America. The company has asked the board for applications for post-war service in this area by Chicago and Southern total 21,516 mi.

Certification—Northeast Airlines asked the board to approve its purchase of properties and franchise of

the defunct Mayflower Airlines, for operations as a Boston, New Haven and Miami-based carrier. This was the first on which the Post Office Department asked airmail bids in 1948. Northeast, which already has included the area in its proposal for helicopter pickup and delivery of mail and express, also asked to amend the Mayflower certificate to include mail.

Busulf Airways, which seeks certification to go from Chicago to Detroit, submitted that application to amend the proposed route to New York Express service would be flown between Chicago and New York with a stop at Detroit. A local route, in addition to Detroit, would go to New York and New York via Michigan City and Elkhart, Ind., Adrian, Mich., Erie, Pa., Jamestown, Kansas and Bangor—East—Johnson City, N. Y., Saratoga, Wilkes-Barre, Pa., and Newark, N. J., en route.

Colossal Airlines, flying between New York and Montreal, requested a route between Washington and Portland, Maine, via Baltimore, Reading, New York and/or Newark, Bridgeport and Hartford, Conn., Worcester, Mass. and Concord, N. H. Among the applicants was one from the Blue Ridge Lines, Inc., of Hagerstown, Md., has operations, which asked for one helicopter route from Washington, Baltimore, Harrisburg, Pittsburgh and Wheeling to specified points in Pennsylvania, Virginia, West Virginia, Maryland and Ohio. The company would coordinate its proposed air-

services with its bus schedules. **Applications**—Joe Forrest of Burbank, Calif., who is Airframe Constructors' association "one call" automobile service to carry airline passengers, wants to do the same thing by air, with autogiros or helicopters, in the San Francisco and Los Angeles areas. He asked to be allowed to carry air passengers and their baggage between airports in these areas, and serve landing fields, airports and emergency landings within a radius of 150 mi.

A new type of application was submitted to the board by S. D. Shuman, J. O. Shuman and M. D. Shuman, as "Shumans" at Fort Worth, Texas. The firm would use helicopters as ambulances and ferries to transport ill, injured and disabled persons and people accompanying them, within a radius of 600 mi. from Fort Worth, and between places within that area and other points within the continental limits of the United States.

Air-Rail Express Up

Rail-air express shipments in the first half of 1948 were nearly 50 percent higher than in the 1942 period, the Railway Express Agency reports, due to continued use of the combined rail and air service by plants and factories at non-airport offices.

In the first six months of this year, 131,420 shipments were handled, on which express charges were 16.6 percent higher than the first half of 1942.

Bell Pledges Aircraft Industry Will Meet Army's Demand for Planes

President of National Council replies to Lovett's warning that firm's task is "unprecedented in this or any other country."

Lawrence D. Bell, head of Bell Aircraft and president of the National Aircraft War Production Council, told Robert A. Lovett, Assistant Secretary of War for Air that "the Army's challenge to the aircraft industry must be met."

"This, characteristically and realistically, is to make it clear that we have a long, hard task ahead. There will be a lot of sweat and blood and little glamour in it," he said.

Reply to Lovett—This was Bell's reply to Lovett's remarks at the dinner closing the council's two-day session in Washington, where Lovett

said the aircraft industry has been called upon to "shoulder a burden unprecedented in the history of industry in this or any other country."

Lovett told the industry leaders more than 60 percent of the Army's 1954 production must be aircraft and aircraft equipment. That represents an enormous increase over current production, which already is straining plant plant facilities.

Assurance—The Assistant Secretary assured executives the Government was aware of manpower difficulties and added that the problem will become even more acute

Coast Plane Plants Rush Tests Of Variety of Helicopter Plans

Development of jet propulsion, increase of speeds to 300 mph, high-life and small-size models sought in at least 26 projects.

By SCHOLER RANGS

Sometime in the future, with jet—

Jet propulsion—Increase of helicopter speeds to 300 mph, or more.

High-lift—Engines having comparatively unlimited ceiling.

Partial perfection of small-size helicopters of one to four passenger payload before completion of large carriers is attempted.

Such are the indications of helicopter thinking, engineering, and actual development in the midst of Southern California's aircraft industry.

26 Projects—No fewer than 26 helicopter projects are reported under way throughout the country, including those of builders whose machines have been flown with varying success and publicity.

The West Coast may account for half of them, with seven projects well beyond the dream stage in the Los Angeles area.

Flight Tests—As approaching completion, with flight tests due in Los Angeles within the next three months, are the helicopters of Landing Helicopter Co., Mainline Trailer Co., and the Machine Shop. The latter is being carried out by Adel Precision Products Corp., Timm Aircraft Corp.; Consolidated-Vulcan Aircraft Corp.; Rotaplane Corp.; and Western Co.

Jet Propulsion—At least two outstanding southern California aircraft engineers believe jet propulsion will be the answer to the most critical engineering problems concerning helicopter development, the problems of speed, power application to rotors, and vibration.

One is convinced the application of light-weight "rocket motors" at the tip of rotor blades is needed. The other is designing a helicopter using Flemer principle rotors and jet propulsion. He believes jet propelled helicopters will reach or exceed speeds of 300 mph.

Rotaplane Head Agrees—In close agreement with the viewpoint is the president of Rotaplane Corp., Ralph W. Milton, production coordinator for an aircraft company. Milton, possessing a qualified

background of conventional airplane design and engineering, says:

"The ultimate in helicopter development, jet propulsion, may not be seen in two or three years. It is possible that excellent results will be attained by the use of a best piston engine feeding propulsion jets in the rear upper surfaces of rotor blades, jets which may be controlled to vary blade lift action now obtained mechanically by cyclic pitch control devices."

Adel Thinking About Helicopters—Adel's president, E. B. Ellsworth, emphasizes, however, that his company's specifications represent "a thinking" along the line of possible helicopter design, without indication that Adel actually will enter heli-

copter development. He says the company is not yet ready to assign their chief design engineers to helicopter projects, major aircraft companies throughout southern California have, with three exceptions, abandoned the idea spontaneously.

The "exception" companies are Consolidated-Vulcan, which has announced a project headed by William Stead, Adel Precision Products, which has prepared engineering specifications for a four-place two-engine single rotor helicopter, and Timm Aircraft, which has a project for laboratory testing of several rotors of unannounced design.

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Some Abandon Idea—Specially ready, earlier this year, to assign their chief design engineers to helicopter projects, major aircraft companies throughout southern California have, with three exceptions, abandoned the idea spontaneously.

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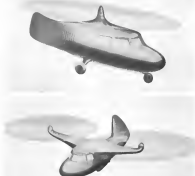
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Engineer's Conception of Helicopter of Future: Photography above shows single rotor and double rotor models of helicopters as envisioned by engineers of Adel Precision Products Corp., Burbank, Calif. Single rotor models have the advantage of lighter weight, not only from a structural standpoint, but from the standpoint of fuel control and fuel power of rotors, which would of necessity be of considerable distance apart. Adel points out that dual rotor models would have to be arranged so that in the event of failure of one motor, the other would operate both drive shafts and controls, otherwise the lifting forces would be thrown off balance.

copter construction for the armed forces is a post-war project.

Best candidates are project manufacturers as Douglas, North American, Lockheed, Vought, Northrop and Boeing on the West Coast will take a part in helicopter building, while experimental projects of major companies have eliminated basic engineering "bugs."

Presidents and engineers of major companies confess difficulties following the year's early wave of helicopter enthusiasm. They cite the failure of existing helicopters to live up to lavish publicity indicating their perfection, persistent failure of helicopter rotors in flight, inability to reach forward speeds appreciably exceeding 100 mph, destination variations, fuel consumption, control difficulties, and limited payload loads.

However, helicopters in the air and still on drafting boards are being watched closely by all aircraft manufacturers, by all armed forces, domestic airlines, Transcontinental & Western Air, Inc. TWA's economics division representative, Louis Inwood, recently collected the following data in a nation-wide investigation of all known helicopter projects. His interest focused on designs that might prove practical for feasible line operations:

Under Contract—Lockheed Helicopter Co., Inc., Los Angeles—Reported single-engine, two rotors with synchronized reversing blades supported by arms projecting outward and upward from a rigidly streamlined fuselage. 100-hp. Polaris engine housed within the body, rotor blades cyclic effort obtained by small blade-pitch alterers. Haul retro-rotating blades inward with main wheels folding into rotor supporting arms. The rotor drive is unique, consisting of rotating main blades at the engine shaft, an auxiliary and actuator disks attached to each rotor hub, the rotor hubs disks linked to engine disks by tension rods, rotors on rotors, attached at disk circumference. The designer is Fred Lundberg, major aircraft factory engineer. To test fly within 90 days.

Under Contract—Bell Helicopter Co., Tex., Los Angeles—Reported single-engine, two rotors with synchronized reversing blades supported by arms projecting outward and upward from a rigidly streamlined fuselage. 100-hp. Polaris engine housed within the body, rotor blades cyclic effort obtained by small blade-pitch alterers. Haul retro-rotating blades inward with main wheels folding into rotor supporting arms. The rotor drive is unique, consisting of rotating main blades at the engine shaft, an auxiliary and actuator disks attached to each rotor hub, the rotor hubs disks linked to engine disks by tension rods, rotors on rotors, attached at disk circumference. The designer is Fred Lundberg, major aircraft factory engineer. To test fly within 90 days.

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Under Contract—Bell Helicopter Co., Tex., Los Angeles—Reported single-engine, two rotors with synchronized reversing blades supported by arms projecting outward and upward from a rigidly streamlined fuselage. 100-hp. Polaris engine housed within the body, rotor blades cyclic effort obtained by small blade-pitch alterers. Haul retro-rotating blades inward with main wheels folding into rotor supporting arms. The rotor drive is unique, consisting of rotating main blades at the engine shaft, an auxiliary and actuator disks attached to each rotor hub, the rotor hubs disks linked to engine disks by tension rods, rotors on rotors, attached at disk circumference. The designer is Fred Lundberg, major aircraft factory engineer. To test fly within 90 days.

weight two-blade helicopter of plastic and metal construction to weigh 500 lb. and still fly slightly less than 50 mph.

Under Engineering Development—Aerobics Engineering Corporation, Red Bank, Calif.—Engineering specifications drawn last immediate production unit contemplated. Model JG-1—Automobile-type body, single rotor, four-blade, two 170 hp. gas turbine opposed Lycoming engines mounted one above the other within the fuselage structure and driving the rotor by gears and hydraulic clutch, large vertical aerial at rear of fuselage to reach near surface downwash and balance rotor torque, directional rudder at base of aerial to be operated by rubber pedals, control of lateral, fore and aft, vertical motion to be by push controls of rotor blades, to carry 90 gal of fuel for 8.9 hr, cruising at 50 percent power, gross weight, passenger version, 1,000 lb., gross weight, military version, 1,200 lb.

Under Development—Van Dyke, Calif.—Otto Thum, president, announced creation of experimental project to design and build by test a series of high-lift rotors of several design. All forms of single and dual-rotor assembly will be studied, as well as rotor construction materials.

Helicopter Co., Los Angeles—Malcolm W. Hillis, president, announced preliminary engineering of a two-rotor helicopter carrying 33-ft. diameter synchronized rotors on horizontal axis rotated at the tip of a streamlined rotor and powered by a 175-350 hp. engine.

The Republic design shows matching rotor blades of pronounced taper



BUNDLES FOR BERLIN:

First close-up picture of American black-busters—4,000-lb. bombs—issued by National Command, Army Air Forces. Shown with the 3-ton model is a "baby" 160-lb. demolition bomb bigger and better black-buster are on the way that the largest our Fortress planes are fitted to carry is the 4,000-lb. bomb, and that has to be carried on special external apparatus underneath the wings, the AAF points out.

from a chord of 18 in. near the roots to 4 1/2 in. at the tips, and progressive change of airfoil designs from roots to tips to obtain maximum lift from an anticipated speed of 40 mph at point of maximum climb and 420 mph at the tips. Hillis claims design of a distinctive method of cyclic control of rotor blade pitch. A forward speed of 400 mph is anticipated for the new type, to be under construction early in 1944.

Bowen Co., Los Angeles—William H. Bowen, owner of Los Angeles factory (not aircraft) and Norman Cox, Pasadena engineer, are designing a rotor they believe will give satisfactory lift and give virtually unobstructed ceiling to a projected light-weight commuter helicopter. They propose a 30-ft. rotor, 20-hp, single disc, "rotorcraft" commensal "helicopter" with the Greek "Pteron" for "wing" having a cross width, including point, of under 480 lb. with a top speed of from 40 to 100 mph. A test model is scheduled for construction early next year.

Consolidated Value Aircraft Corp., San Francisco—The firm has announced a project for production of a small experimental helicopter has been assigned to William H. Shaw, manager of General's Small Research Division. He proposes a Heliback weighing 1,500 lb. with a 22-hp engine powering a 33-ft. rotor, and carrying two passengers and baggage.

British Air Units Reverse Lend-Lease

Priority used for war freight on returning transports.

British Overseas Airways Corp. and the RAF are working a reverse lend-lease type of operation by bringing materials on transport planes returning from overseas, according to W. W. Bretterhoff, chief International Air Transport Division of the Office of Economic Warfare, soon to be under the new and enlarged Office of Foreign Economic Administration.

The division, whose men act as freight forwarders, has been working for some time with the Air Transport Command and the Naval Air Transport Service since it was found that extra space on transports returning to this country could be utilized to fly critical raw materials back after being purchased by the War Relocation Administration.

Other kind of lend-lease in addition to strict British transport, these freight forwarders have even utilized space on airlines operating outside the U. S., such as Pan American and American Express.

During recent months, their activities have extended to "air ex-

pressing" from points in port outside the United States and in addition they say the British are bringing materials from South America to the U. S. for trans-shipment to Britain.

War Previews Cargoes—The freight forwarders have Army class 4 permits, within which class WPA has set up a priorities system for the most needed materials. Typical cargoes handled are mica, quartz, tungsten, beryl and tantalite. Rubber has no priority and is used only as a "filler."

The Army, Navy, Combined War Materials Board and other war material procurement agencies meet with WPA and decide priorities. OEW is then informed of the priority used, after purchasing the materials with their funds, turns them over to freight forwarders in their organization.

International Air Transport Division is a wartime subsidiary (left) and already say they will have for place in the post-war picture, although they have maintained a small research staff, a part of whose analysis section is now doing a small job at the request of the Army.

Truman Group Cold To Willow Run Probe

Ford cites production gains in reply to union demand for inquiry.

Demands by the United Automobile-Aircraft-Agricultural Implement Workers of America (UAW) for a constructive investigation of Henry Ford's Willow Run plant brought the reply from Truman Committee members, in the absence of Senator Harry B. Truman, that an immediate action for official denials, although further details might be sought if warranted by the evidence.

Changes against the plant were made in identical letters sent to President Roosevelt, Secretary of War Stimson and Senator Truman.

Labor Policy Assailed—The letter and the plant in decentralizing and shifting to other plants the manufacture of small parts and assemblies while planning to make Willow Run a final assembly plant, and added that, although the plant at present is idle at least six hours a day, another large building is being constructed with no prospect of additional employment. That the union party's labor relations policy is retarding production and that government officials assigned to the plant are "ahead of the power of the Ford Motor Co."



AL WILLIAMS TOURS AAF BASES:

Meekins on the line at Foster Field, Tex., atop main wing May 20 Williams, World War I hero and aviation columnist for Scripps, toured military bases on a tour of Army Air Force bases. Behind is Maj. Williams' former Greenham Golf Club, familiar to AAF bases and commercial airlines throughout the country. Williams is manager of the aviation department, Gulf Oil Corp.

The company replied to the charges by pointing out that peak production had not been reached but that production had definitely increased month after month.

The union proposed an immediate investigation by the Truman Committee, signed by WAC and the President's Committee on Fair Employment Practice to conduct disinterested, establishment of a committee to represent management, government and labor with full control and responsibility for efficient operation; recognition of joint management-labor committees, guarantee for workers that WAC rules on skills and referrals will be followed, transfer of workers to other Ford plants nearer their homes when departments are moved, and refuse Ford Motor Co. additional buildings until present facilities are fully utilized.

OWI Reveals Work Of Anti-Sub Command

Link-publicized AAF group plays big role in rescue of victims.

How planes of the Little known Army Air Force's Anti-Submarine Command rose out to sea, often within five minutes of the receipt of distress messages by the Federal

Communications Commission, is told for the first time in an OWI report. \$5,000,000,000 Program—Every airplane is equipped with two or more complete communications sets, the report, released Oct. 3, said. Of the Regular Corps' five-billion-dollar communications equipment procurement program for this year, 90 percent is to be spent on radio.

The Coast Guard has five radio-telephone stations to watch for distress signals and other installations.

Monro Cites Danger Of "Big 4" Monopoly

Sees "Economic Unbalance" In Control of Air Business by Few Lines.

A champion for the nation's smaller airlines lashed out last week at the virtual monopoly on the part of the four largest airlines of the most lucrative routes of the country, in the first public rift among the 16 domestic operators who signed a joint declaration of post-war aviation policy last summer. Henry Monro, president, C. DeWitt Mason, deemed what he called an "economic unbalance" that leads to "at least 51 percent" of the nation's air business in the hands of the "big four" airlines (American, Eastern, TWA and United), while a



100 MEN ON WORLD'S LARGEST TWIN-ENGINE PLANE

Curtis Commando, the Army C-46, shown with mechanics of the Army Air Force Eastern Technical Training Command at Camp Chertman, showing its

size and strength. The C-46, transporting men, equipment and supplies into the war zone, is expected to be one of the leading post-war cargo planes.

"less than 10 percent is sparsely distributed among the 12 remaining carriers."

Warning of Monopoly.—He asserted that this "danger" to future aviation development had been "considered only vaguely, discussed by only a few and never expressed publicly either as to fact or implication."

It can only be remedied, he suggested, by authorization of services by qualifying carriers in areas where both actual and potential traffic volume justify such direct competition, with careful study of the degree of competition needed in the "51 percent field."

Urges Correction.—Unless the situation is corrected, said Meno, who was speaking before the Milwaukee civic leaders, the aviation industry will be unable to carry out its post-war reconstruction obligations, assure jobs to returning soldiers, and bring lower rates and a resulting cycle of greater expansion and greater employment.

The disposition between the four largest airlines and their smaller counterparts, he said, was one of three monopolistic dangers confronting aviation progress, the other two being global control of international air routes by a single company, and efforts by surface carriers seeking to "invade the air world."

He stressed the first, however, although he said history might show no other course could have been taken. "No blame can rightfully be attached to anyone for this situation—legislators, government agencies or the companies involved."

Correction.—But the look "down" had been definitely made for his retirement on that date. However, the

stem of self-evident facts when, with control of at least 10 percent of the business of the country, these carriers have laid plans and are making additional operating circles for direct competition with the smaller carriers for a substantial proportion of the remaining 10 percent. "Issue should be taken on any policy, he added, which will "perpetuate or intensify a virtual monopoly, even though such a monopoly were created originally by force of circumstances."

Economic Disbalance.—Meno explained that the economic imbalance of which he spoke dealt with the kind of territory served, particularly as to traffic potential, rather than size measured by route miles. For each route mile of the big four, according to his figures, three times more business resulted than from each route mile of the other 12, an evidence of "severe restriction on the potentialities of the area served by the 12 smaller carriers as against the little area practically monopolized by the big four."

Von Hake Resigns

C. S. Gross becomes Lockheed vice-president, general manager.

Lockheed Aircraft Corp. dropped a top executive in announcing the "retirement" on Oct. 1 of Richard A. Von Hake, vice-president in charge of manufacturing.

Said Robert E. Gross, Lockheed president: "For several months Richard Von Hake and I have been discussing his desire to retire from the company Jan. 1, 1944, and plans had been definitely made for his retirement on that date. However, the

increasing pace of the war has made a greatly increased fighter plane program—especially on P-38s—necessary immediately, and consequently the organizational changes which would have taken place at the end of the year have been made now."

At his Burbank home Von Hake told Aviation News: "I have read the announcement, and whatever Lockheed wants to say is satisfactory to me. Actually, the pressure developed while I was away on a three weeks vacation and I could not be reached. I intend to spend some time on my ranch in Utah, rest awhile, and then decide my future plans."

Gross assessed that Courtland S. Gross, his brother and president of Vega Aircraft Corp., will become vice-president and general manager of Lockheed Oct. 1 and will also continue his Vega presidency. Barron McIntosh, formerly in charge of production control at Vega, will become special assistant to the president in charge of management control, organization control, and master scheduling at Lockheed.

Von Hake's industrial career began in 1923 when he took a job as a machinist at Douglas. He was promoted to design engineering in 1927, then joined Lockheed in 1928 as chief draftsman. By 1932 he was Lockheed's works manager, responsible for 86 percent of the company's custom operations and all branches of the corporation except sales, accounting, credit, and general administration. A University of Illinois graduate, he served as an Air Corps pilot in World War I and been-terminated prior to joining Douglas.

THE AIR WAR

COMMENTARY

Late Model Zeros Lend New Life To Much Battered Jap Air Force

Marked improvement in Japanese aviation equipment reflected by Pacific observers; more powerful motors and armor protection give enemy formidable defense.

There are many strains in the wind which indicate that a fresh mental appraisal of the Japanese Air Force is very much in order. At the recent War Department conference of industry, labor and newspaper leaders, Maj. Gen. George V. Strong, Assistant Chief of Staff, Military Intelligence (G-3), made a statement which must have surprised most of his listeners.

"In the air, Japanese strength is also on the upgrade. The enemy has not only replaced the planes lost in combat, but both numerically and in quality of planes the Jap air force is improving. Moreover, the pilot's training program has been stepped up to keep pace with the accelerated production schedule."

Authenticity of Opinion.—In the strict official sense, this opinion, especially if supported by the Chief of Naval Intelligence, is the highest in

the country. It may be presumed that it is served at after all the information available in Air Staff Intelligence (A-3) is taken into account, which in turn has its own excellent sources in the local A-1 personnel in each of the Air Forces in the Asia-Pacific theater, the Truth in Asia, under Gen. Donald, the Fourteenth in China, under Gen. Chennault, the Fifth in Australia-New Guinea, under Gen. Kenney, the Thirteenth in the South Pacific, under Gen. Twining, and the Seventh in the Central Pacific under Gen. Hobb.

Facing the Facts.—At the same conference Lt. Col. Frederick Williamson, chief of the Planning Division, of Air Staff's Planning Division, called attention to some important facts in the following statement: "Japan has given impressive evidence of a capacity to produce, despite heavy losses, an increasing

number of first-class, though decidedly vulnerable, combat aircraft. Because of her interlocking airfields—extending from Formosa in Burma, Malaya, the Philippines, India, and on through New Guinea and the Solomon, to the Mandated Islands and the Marshalls—Japan has achieved an aerial mobility which enables her to concentrate even short-range fighter planes operating at any chosen point, for either offensive or defensive purpose.

"We lack areas of such overlapping bases, and are therefore required to deploy, in each of several localities, the number of aircraft essential to match the entire Japanese potential. This should evidence the necessity, both of destroying Japan's aircraft production at its source, and of a pronounced superiority of planes in the Pacific."

Sensational Brewster's Super-Zero.—On top of this comes Senator Ralph Brewster of Maine, one of a group of senators just back from a swing over the world's battlefronts in an Army transport plane, who says the Japs have come out with a new fighter plane more formidable than the Zero, which was proving plenty tough, though only a few have been captured as yet. He was given to understand that the super-Zero closely resembled the old Zero, but is faster, better protected and has more fire power.

"Zeke" and "Hop."—During the past year or more, reports of unproved Zeros have come in from time to time. At the outbreak of the Pacific war, at least two types of



NAVAL AIR TRANSPORT SERVICE DELIVERS THE GOODS:

An idea of the NATS role in supplying war zone, medical supplies and mail to fleet units and Naval establishments in all parts of the world is shown above. Navy's stores in Coco Solo (Panama) Equatorial, a Morris Mariner—preparing to sail out of Naval Center, passengers boarding another NATS flying boat at Jamaica in preparation for a flight to the Canal Zone. NATS carries 15,000 Army and Navy men of the

United States and confers thousands a month but its big job is flying up million pounds of vital supplies monthly to all parts of the world. Right, two transports being prepared to hop off on the return trip from Rio de Janeiro northward to Natal with a cargo of goods. High grade Brazilian quartz is much in demand in the United States for manufacture of military radars. Containers hold various maintenance materials





MANPOWER BUILDS AN AIRPORT IN CHINA:

Using the crude, handmade tools of typical centuries, and her inexhaustible manpower supply, China is now paving out airfields for the eventual aerial aggression against Japan. With stone hewn from the nearby

mountains and transported in packtrains, the fields are leveled off by hand and then rolled, shown above, pulled by hundreds of Chinese. *Picture is among the first made by AAF photographers in China.*

Zero were encountered, the very light Army type with an 850 hp engine and speed of about 345 mph, within a few months this model came to have dropped out of the picture. The Navy carrier or land-based, type-66, made by Mitsubishi and Nakajima became the main fighter type encountered in the Solomon, New Guinea and in China, and it still was overwhelmingly outstanding. Army fighters seen in action in these areas (The Zero, as is now well known, results from the -00 in the designation, which stands for the Japanese year 2698, or 1944, the year in which this, and several other Japanese types, bombers as well as fighters, first went into production).

This plane, Zero, Mark I, has a 1,200 hp radial engine and a top speed of about 328 mph. According to a recently released War Department wall chart it is known by the code name "Zerk". An improved Zero, Mark II, with square wing tips, better engine and top speed at 344 mph, is known as "Hap" (Haps have been around for several months, so evidently Senator Brewster's super-Zero is either a Zero, Mark III, or an entirely new fighter. We shall have to wait for more information on this point. It is very unlikely that it is as good as our Lightning, Corsair or Mustang.

"Nate" and "Oscar"—A similar relationship exists between the Nakajima (and Mitsubishi) -67 fighter and ground attack ship, which went into production in 1942. It was widely used in the China-Burma fighting and the early battles in the Pacific. Its code name is "Nate," and top speed was around 280 mph. The new version, called "Oscar" by our pilots in the Nakajima Type I, this has come into action since Pearl Harbor and appears to be the first attempt the Japs have made to provide self-sealing fuel tanks.

"Type-3 New in Action"—Still more recently, reports have appeared in

the press of a new Type-3 Army fighter, some 28 of which were observed in fighting over New Guinea during the last week in September. The code name for this is "Terry" and very little has been known about its performance. However, on September 30 the Associated Press carried a story about "Japan's dangerous new fighter plane that can outpace the American P-51 but cannot outclimb it, and which apparently has a short range." It may be that this is "Type-3," and it may even be Senator Brewster's "super-Zero" as far as we know at present. Anyway, some of the details in the AP account are full of interest.

Increased Power and Protection.—It is equipped with a V-type in-line liquid-cooled engine, the first Jap fighter to use this type. It is undoubtedly a Daimler-Benz 90, built under license, as a few Me-109's (1939-40 version) turn this engine have been found into action by Jap pilots (This plane is called "Mick" by our pilots, as the Me-109's were called "Mick" by RAF and AAF pilots in the western desert). The new plane is harder to down in combat because of the armor protection for the pilot, which the Zero and other Jap fighters in general have not had yet. A pilot who shot down one of these new planes late in August said it looked like a British Hurricane. The idea of the short range appears to be that so far most have been encountered far from the main base. This will be surprising, if true, as all Jap planes, fighters as well as bombers, have hitherto been noted for unusually long range, even without drop tanks (also used). However, it may be that in the inevitable compromise found in any fighter plane, range was sacrificed for pilot protection, added fire power and greater ruggedness, that it could outlive the Lightning. One still would like to see this, but it may have happened.

Dark War Review.—The week's fighting was hard. On the Italian Peninsula, the old-fashioned infantry-stillies team fought it out with the enemy on every ridge and village, but with tactical air assistance. The air warfare against Nazi Europe continues. Eindhoven has been bombed by Flying Fortress escorted by P-47 Thunderbolts—the longest escorted flight yet. Enemy resistance was heavy, the proportion of losses was in our favor.

Heart of Reich Bounced.—Up from Northwest Africa, Fortresses and Liberators struck over the Alps at Munich and at Wiener Neustadt near Vienna. Vienna was first visited by our middle east bombers about a month ago. The RAF hit more than only Eindhoven, but also Hanover again, as well as other targets in the Nazi heartland, resulting in another raid on Munich in this latest air-sea development of Allied Air War.

The air-sea offensive was continued with Flying Fortresses penetrating industrial Germany in daylight to bomb the great steel city of Frankfurt and a big fleet of British four-engine bombers struck heavily at Kassel, one of Germany's principal aircraft and arms centers.

Air Supremacy.—In Burma, both RAF and the 16th U S Air Force increased the intensity of their raids on enemy sensitive points, softening up for hold. Our 14th Air Force has been holding in the Gulf of Tonkin, the lead on Hough being particularly heavy. Logistical problems have hampered our air activity to some extent. Enemy raids on our fields in southeastern China resulted in no heavy damage.

Britain's recent "secret weapon" which has been causing a minor flurry in London and elsewhere, turned out to be a plane similar to our Gruntzappers and used for the same purpose.

NAVY/AF/AF

AIRCRAFT PRODUCTION

Manufacturers Study 3-Point Plan To Ease Plane Manpower Shortage

Heads of 15 leading firms ask U. S. to put teeth in certificates of availability rule; continuous draft deferment and return to industry of vital workers asked.

Fifteen leading aircraft company presidents, meeting in Washington, recommended these voluntary co-operative steps which possibly would solve and certainly would reduce the pinch of manpower shortage, greatest production problem.

Critical shortages of manpower in the aircraft industry represent the principal obstacle to the greatly increased production which the armed forces are calling for and non-commissioned among members of the National Aircraft War Production Council and with military and government authorities made increasingly clear that combat strategy and success depend heavily upon increased warplane output.

Recommendations.—The industry leaders, after two days of meetings recommended that:

1. Certificates of availability, through which an effort now is being made to control turnover in critical labor shortage areas, should be implemented and strengthened by immediate Executive or Legislative action, to require compliance by both employer and employee. Proper penalties should be established for failure of either to comply with the Certificate of Availability procedure.

2. Continuous draft deferment, for a period of no less than six months of necessary personnel in aircraft production at the greatest urgency, so long as military and government authorities decree that the aircraft production program needs the full of weapons essential to victory.

3. Return to the aircraft industry, by a screening process, of essential workers whose skill and training can contribute most to the war effort on the production front, rather than in one of the military services.

Turnover Greet Problem.—Of all factors in the manpower problem, most vital in that of labor turnover. Council members reported that employee turnover is running as high as 100 percent a year in some plants

and that the turnover among women employees, who have to be depended on more and more, is higher than among men.

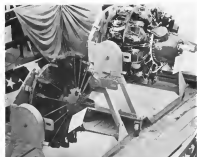
In their discussions of wage incentives to spur production, the executives agreed that complexities of producer stipulations of constantly changing designs make it difficult to arrive at standards applicable throughout the industry.

Solution Studied.—The question was left for individual company de-

cision, the council members believing that no one plan or plan evolved could cover the entire industry, although the staff of the National Conference was instructed to continue studies, in cooperation with military and government authorities, in an effort to find a uniform and simple standard.

Pointing out that there has been a tremendous increase in the pounds of airplanes produced per employee, despite the fact that no other instrument of war calls for so many skills in manufacturing as combat airplanes, the company heads conceded that perfect utilization of labor, of course, has not been realized and that it never was realized by any industry, even when operating in the relatively placid and simple circumstances of peacetime.

Solution.—The aircraft companies are of the opinion that solution of the manpower problem should be sought through voluntary means and cooperation of government, management and labor, and that mutual labor conservation should not be considered until and unless all other efforts have failed.



100,000TH WASP TURNED OUT:

Shown here are the first and the latest Wasp engines. Pratt & Whitney Aircraft Division of United Aircraft Corp., last week commemorated shipment from its East Hartford plant of its 100,000th Wasp engine, less than 18 years after the first successful test run of its first stock, air-cooled Wasp. The figure represents production of the East Hartford plant alone, and does not include engines being built by Ford, Buick, Chrysler, Nash-Kellogg, Continental and Jacobs. Since May, 1930, Pratt & Whitney has shipped one hundred million horsepower from East Hartford. It added that the price per horsepower had been reduced by 38 percent.

Truman Reports New Progress at Lockland

Senator Harry S. Truman, Missouri, chairman of the Senate investigating Committee, reviewed the committee's inquiry into conditions at the Lockland, Ohio, plant of Curtiss-Wright in a radio address last week and said "I am very glad to be able to tell you that since our report Curtiss-Wright has taken drastic action and recently has made real progress."

All in the Good—The steps are all to the good," Senator said, and the committee will support fully every effort of Curtiss-Wright to produce good engines and planes. Senator Truman outlined testimony on the re-examination of some engines produced at Lockland and added that this is a "direct, final and conclusive answer to the contention that the engines produced were not defective and were fit for use in airplanes."

Paterson Called—In the meantime, Senator Truman said the public was entitled to know what the Army found when it examined one of the engines, but that Acting Secretary of War Patterson had re-

quested that this information be denied the public. Truman then called Patterson to appear before the committee and explain.

Following this allegation, conferences were held by the committee with officials of the Army, including Patterson, and Truman reported that he was advised by Patterson that "investigations made by the Army confirm the findings made by the Truman Committee as to the construction and suspicious of engines."

The public hearing called for Patterson's explanation subsequently was called off.

Lockland Rebound

Recent production cutbacks on the up-trend at Curtiss-Wright's Lockland, Ohio, plant, again as the news is a result of Senator Truman's radio address. Although comment on output is lacking, unofficial sources said September production estimates were several times the July low-point, and added that if the trend continues, October production would show further substantial increases, and possibly set a Lockland record.

Stout Says Plants Could Shift To Mass Auto Output After War

Urges "economy of speed" in development of freight transports; foresees an air flier man in street can buy and operate.

By SCHOLER BANGS

William B. Stout, famous for building "workable models" of his radical ideas, has his own vision of aircraft industry's post-war future.

Major stresses building automobiles, and doing a better job than the automobile industry.

Immediate mass production of small, safe, roadable airplanes that the man in the street can buy and fly.

Recognition of "economy through speed" as a factor that will end current thought of "low and slow-flying bombers" and make high speed a "must" in the design of an freighter for tomorrow's air cargo routes. Good is money of Stout Research Division of Consolidated Vultee Aircraft Corp., but it is an individual looking toward the post-war horizon that he said.

See Few Companies "American aircraft plants easily could convert themselves into automobile production."

"With the aircraft industry's knowledge of the use of soft dies, quickly made, it could produce 10 different experimental automobile models in two weeks and could afford to deliver easily used die looking until it has discovered the automobile that the public wants."

"The industry would not be hampered by auto industry assumptions that are governed largely by preconceptions of mass production."

Design and Production—"Design of tomorrow's automobiles will be influenced by the airplane industry because the airplane people do know design. The automobile people know production, but not design. That's why there has been no new automobile design in the last 10 years."

"In the post-war production of air-



AIRCRAFT LEADERS CONVENE IN WASHINGTON

Management leaders of the nation's largest aircraft companies are shown at meetings for meetings with the War Department and for business sessions of National Aircraft War Production Council. Seated left to right: Donald Douglas, Douglas Aircraft, El Monte, Calif.; Northrop Aircraft, T. Claude Ryan, Ryan Associates, and president of West Coast Coastal Aerospace, D. Bell, Bell Aircraft, and president of National Aircraft War Production Council and of the East Coast Council; C. Carlisle Ward, Jr., Fairchild Engine & Air-

plane, Glenn L. Martin, The Glenn L. Martin Co., Gary, W. Vaughan, Curtiss-Wright Corp., and Alfred Messers, Republic Aircraft. Standing, left to right: C. T. Leigh, vice president of Consolidated Vultee, Cyril Chappellier, vice president of Lockheed Aircraft, De Roland Birenson, vice-president of Brewster Aeronautical, Victor Bressler, The Aviation Corp., P. G. Johnson, Boeing Aircraft, J. H. Kunkelberger, North American Aviation, and C. Head, General Motors Eastern Aircraft Division.

craft the biggest step will be the building of the privately owned airplane.

In the aircraft business we had to start at the "tail end" of airplane production because the private owner and was unable to finance the research necessary to provide the plane.

Need Civilian Plane—Now, or when the war ends, we can build that plane. We have the engineering knowledge, the research background, and the tools to do it.

"When peace comes, it should be on the market in less than a year. As I see it, the ideal civilian airplane will be a two-passenger plane with an engine of not much more than 300 horsepower. It should give 30-mph ground performance with a 4-1/2 hour range at 120 mph. It can be designed as a roadable plane that will possess easily folding wings, travel 25 mph on the highway, and have a 90-degree wheelbase that will allow it to be parked as you would park a baby Austin."

Economy of Speed—"The prospect of intensive air freight operations after the war will, I believe, awaken realization that the economy of an airplane is not in the fuel that can be saved by throttling horsepower or using small engines for low and slow flight."

"Economy is based on the fact that an airplane is in the air—the quantity of air it can carry in a given number of hours as balanced against fuel hourly operating costs."

"As a first economy measure, our firm has not long ago been ordered to reduce power output by 100 hp. Results showed conclusively an overall increase, rather than decrease, in fuel consumption, and the order was immediately quashed."

Helicopters—"I think the trend will be for economic reasons, to build the lightest possible cruising speeds into the design of our post-war passenger and cargo planes."

Stout believes that "today" the production of civilian private planes is under way there will be a degree of helicopter development. But he feels that high speeds will be gained by the helicopter, and views it as "really a step toward other things."

Harmony Is Keynote At Capital Sessions

Jolar action in National Council talks show industrial teamwork

By SCOTT HERSHEY

The aircraft industry has demonstrated in its activities outside and to its relations within that it is capable of setting aside individual differences and working together as a unit in the solution of its mutual problems for the common good.

The recent meeting in Washington of top executives of the member companies of the National Aircraft War Production Council is a case in point. This highly confidential conference followed by only a couple of weeks the meeting of the Economic Development Committee of the Aeronautical Chamber of Commerce at Colorado Springs where industry leaders covered the kind of cooperation which has streamlined them looking in the past.

Understanding—Aircraft company heads who came to Washington for the War Department's Conference of industry, labor and press leaders, which lasted two days and, followed that by two days of council conferences, were unanimous in their belief that the aircraft manufacturing industry now had been more united or possessed of a better understanding.

Recommendations made by these executives—which are discussed elsewhere in this issue—were important and significant—were more important or significant than the atmosphere of cooperation in which they were drawn.

Teamwork—Men attending the Washington meetings—draw both costs—like the representatives of more than 50 companies at Colorado Springs showed teamwork within the industry and also by the judi-



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try with government. They represented a good illustration of industry opinion and their conclusions acknowledged and accepted the responsibility and the vital role now being played by aviation and which will be played by the industry in winning the war and the peace.

Conversations with industry heads left little doubt that the information given them in private by top-ranking military men including Gen. George C. Marshall, was impressive in its scope of the job which the industry must do. Production and mass production was called for and probably different kinds of production to meet the changing demands of the various fronts.

Air Strategy Discussed.—The sessions an strategic briefings of Germany and Japan, information on the establishment of air bases, movement of supplies by air, discussion of enemy strength and our own losses in men and material and our own needs and problems generally as seen from the Army point of view added significance and importance to the council meetings which followed the War Department sessions.

Chamber Members To Vote on Changes

New name, three-year budget, and new membership clauses studied.

The Board of Governors of the Aeronautical Chamber of Commerce has today set into motion its reorganization program to approve in principle recommendations on such post-war problems as contract termination and renegotiation, and use and disposition of surplus government-owned aircraft and disposition of defense plant equipment.



INDUSTRY EXECUTIVES AT PRESS CONFERENCE:

Classroom of aircraft officials takes at a press conference during their Washington meeting (left): Ernst R. Beech, Beech Aircraft; Donald Douglas, Douglas Aircraft; Dr. Roland Brunsen, Brewster Aeronautical; and P. G. Johnson, Boeing Aircraft. Photo on right:

made by the Chamber's Economic Development Committee at its Colorado Springs meeting.

The chamber reorganization—with an eye on peacetime production—is still in the works. Present plans call for a three-year budget, a three-year contract for the executive head of the chamber, as well as other plans designed to make it the vocal, effective and strong industry trade association which industry leaders say they are determined to make it and which they say it should be.

Vote Required.—Proposals to change the name of the chamber to one which more clearly indicates its status as the trade group of the aircraft manufacturing industry were deferred when the Board of Governors held that the chamber's name was the property of the members and consequently could not be changed without a vote of the membership.

Another proposal to eliminate all classes of membership except the airplane, engine, propeller and aircraft equipment classifications also was deferred on the grounds that such a decision was an action to be taken by the board.

Plans Continue.—It was considered fairly that at a meeting of the full membership, there are more than 250 members, would be called in the near future in the meantime, the reorganization plans are proceeding.

Changes are in the offing and industry heads in Washington for meetings of the National Aeronautics War Production Council approved chamber reorganization plans and assured their backing—not as a coalition course but rather as individual companies and chamber.



members. This should assure the success of the project.

It is the hope of the backers that company heads themselves will appear on the Board of Governors rather than their alternates, a practice which in the past has not worked too successfully.

Plane Output Shows Unit Loss; Weight Up

September figures show continuation of unit record losses; weight up

By MARY PAULINE PERRY

T. P. Wright, director of the Aircraft Resources Control Office, commenting to Aviation News on failure of September aircraft production to show an increase in units, pointed out that weight of aircraft produced increased a percent over the previous month and reiterated that weight and not units should be the measure of output. September unit output was just short of August's 7,812 figure.

He said that September production, while it failed to gain over August, did not reflect a decrease in aircraft production generally throughout the country, but was due rather to a production lag by two or three companies who fell so far behind in production that the industry was off for the month.

Plans Covering.—Wright, in suggesting that unit cost be eliminated as a basis of industry output pointed out that some plans are converting from the production of light bombers to heavy bombers with an inevitable falling off in unit production during the conversion operations.



about C. T. Lough, Consolidated-Vultair; Victor Emmanuel, Aviaton Corp.; Glenn L. Martin, Glenn L. Martin Co.; and J. H. Kinnelberger, North American Aircraft. (Standing) Frank Stutzel, general manager of the National Aircraft War Production Council.

Turning to the West Coast manpower situation, Wright said that several steps must be taken to solve the problem, with the first probably the introduction of longer working hours. He indicated approval of a proposal for ten-hour shifts which has been put forward by Charles E. Wilson, WPA executive vice-chairman and other production officials. Wright said any personnel would probably have to be recruited from the armed services and that labor and management would have to cooperate on the reform plan.

Most Unlucky Workers.—Improvement in utilization of workers is necessary, Wright said, and also utilization of derivatives of availability that have come forth.

Wright's office has completed its production urgency list for each area, listing plants which must have high manpower utilization. These are now being worked with Army and Navy requirements into one complete list.

Lombard Returns.—In this connection, Dr. E. A. Lombard, Jr., ARCO's manager of research and development who has just returned from the West Coast, said the new manpower program is being received industries, but that far has not touched non-essential plants.

There has been some expansion of subcontracting on the Pacific Coast and some action for declassification. Col. Donald F. Stone, Army Air Forces and Capt. Leland L. Smith, U.S. Navy, are in overall charge of ARCO's part in the West Coast program.

Compressibility Is Designers' Bugaboo

Engineer of Chance Vought Division, as SAE meeting, sees future for propeller-equipped aircraft.

"Compressibility" is the biggest problem confronting aircraft engineers today. This is the piling up of air against the leading edge of a wing, accelerated into high speeds until smooth airflow over the wing becomes impossible and destructive buffeting results.

The design of warplanes for speeds approaching the speed of sound, and the velocities of test pilots into super-sonic speeds in its drive to start engineers throughout the world into intensive research to overcome these mountainous barriers against faster flight.

Solution Foreseen.—Such are the views of Samuel J. Loring, engineer



WAR EDITION OF THE FAIRCHILD 24:

War edition of a little-known light cargo carrier built by Fairchild and used by the Army as the Forwarder. The predecessor of this four-plane ship, known to the British as the Argus, is used on many foreign fronts in transporting pilots and officers behind the lines. It also was used to carry ammunition. The Forwarder is a revision of the C-61, built in 1942 for the RAF and is a replacement of the well-known Fairchild 24, the company's best seller before the war. Gross weight is 2,600 lb., empty weight is 1,330 lb. Engine is a Warner 265 hp. Cruising speed is 164 mph.

and head of the analytical research department, of Chance Vought Aircraft Division of United Aircraft Corp.

Attending the SAE aircraft conference in Los Angeles, Loring predicted the addition of compressibility and other problems confronting approaches to super-sonic flight may come from the coordinated results of mathematical investigation of aircraft design and free-flight observations of engineering test pilots.

Studies Propellers.—Loring is unwilling to accept the assumption of some engineers that super-sonic speeds will not be possible for propeller-driven aircraft. He believes there is much to be learned, and gained, from the study of propellers operated at super-sonic speeds.

Nor does he feel that jet propulsion as a sole motive power will be the answer in driving aircraft through compressibility barriers and into super-sonic speeds.

Boosts Motor.—As a source of power, the rocket motor or jet propulsion engine may not prove efficient and practical until we are able to operate aircraft at extremely high altitudes and at speeds of perhaps two to three times the speed of sound," he said.

AAF Asks Simple Warplane Designs

Head of Air Service Command tells SAE members of Army needs

Better standardization of replacement parts for military aircraft, and simplification of warplane designs for easier field maintenance are among high-priority "requests" handed to the U. S. aircraft industry by the Army Air Forces.

They were given by Maj. Gen. Delmar H. Dornier, deputy director, AAF Air Service Command, Wright Field, in an address to industry engineers and executives attending the meeting of the Society of Automotive Engineers in Los Angeles.

Designers.—General Dornier, who organized the 12th Air Force ABC, and directed it throughout the North African campaign, gave the nation's aircraft builders the highest possible praise for providing the armed forces with "the finest aircraft in the world."

"We expected them to be good, but didn't know they were as good as they are," he said.

But his praise was followed closely by telling of a critical lack of uniformity in identical replacement

parts produced by different manufacturers.

Parts Problem—Life said that in many instances manufacturers' errors of the armed forces have been compelled to order parts not only by serial number but by manufacturer's name as well to assure getting exact duplication of parts supposedly standardized.

Gen. Danton emphasized his appeal to manufacturers to simplify their warplane designs and thus simplify maintenance by doing Germany's Messerschmitt + 109 fighter as an excellent example of design simplification.

Without referring to manufacturer's names, he added:

"We have some airplanes that approach it, but we also have others that are a crew chief's nightmare."

Power Engines—But whether the aircraft industry will voluntarily take any radical steps toward design simplification was left in doubt by a debate on proposals for reduction of engine types and their delivery to airplane manufacturers in the form of fully assembled "pavee eggs" ready to bolt on.

Airlines and airplane spokesmen were adamant in their refusal to accept engine type reduction and power egg proposals made by Rudolph Wallace, Pratt & Whitney Aircraft installation engineer, and Harry Kuebler, Allison installation engineer and Mandy Menck winner.

Specific Job—Lyne Shogren, chief of the power plant section of Douglas Aircraft Co. at Santa Monica, admitted that the engine should follow the dictates of airplane design rather than make the design of an airplane conform to standardized power package.

"I feel the engine must be built to do a specific job," said Shogren. "In fact, I anticipate that rather than reduce the number of available engines we will need more engines to meet the requirements of airplanes designed for service on varying routes and at varying altitudes."

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Airlines Urge Caution in Granting Permits for Feeder, Pickup Routes

The airlines came into the Civil Aeronautics Board's hearings last week to urge that it proceed cautiously in granting certificates for local, feeder and pickup service, while they agreed unanimously that such service is needed.

A sentiment echoed by other witnesses was expressed by Lee Talman, executive vice-president of TWA, when he said establishment of local service is needed to be economically sound, but should be "based on a sound basis, not a hysterical stopgap." Talman and several others suggested local service adjacent to trunk lines should be handled by trunk operators, but that purely "pickup" service should be an independent proposition. Talman said the latter might pattern after railroad communication service of the "wheel and spoke" type.

Trunked Services—The idea of trunk services reached full flower in the testimony of R. H. Hensel, economist for United, who said service should be tailored to existing towns as "trunk type" routes along existing air trunk lines, an "arch type" serving away from one trunk point and back to another, and feeder or branch or a loop to channel traffic from cities of small population. These feeders, he suggested, might follow patterns he described with such labels as shuttle, herring bone, connector sandwich, cluster, etc.

American's economist, Arthur De Lewis, came forward with a proposal for "conservative airports strategically located." He said that with 160 airports in addition to those already in existence, 1,136 new cities could have air service, which then would be available to all cities of 20,000 or more population, 89 between 10,000 and 20,000, and all but 405 between 5,000 and 10,000. The result would be air service to 95 percent of the country's urban population.

Revolutions—Furthermore, Americans suggested that eventually some existing airports might be relocated near their present areas to serve larger population areas that might thus be accessible.

Continental's executive vice-president, Theron C. DeWolfe, told the board's commissioners that "transportation carriers should not get into local service," nor should the opposite occur. Service outside trunk lines should be carefully planned,

and their operation left to independent operators, said Robert J. Wilson, vice-president and secretary of Pennsylvania-Continental. PCA, Wilson explained always has considered itself a short-haul operator serving local communities within 25 mi. of its trunk lines. Use of smaller supplemental equipment is proposed by PCA, he asserted, both for additional stops along its main routes and within 25 mi. radius.

Three Types—Northeast's position about to E. K. Flom, secretary, is to expand the main routes first, but he visualized three types of additional service: auxiliary trunk lines, alternate main line routes, and feeder spur routes.

The viewpoint of an applicant was presented by R. E. McKaughan, president of Aviation Enterprises, Ltd., which operates air taxiing schools at Texas, and serves routes in the Southwest. McKaughan said he thought companies which already have trained pilots should operate the secondary airways.

Spokane Air Mail—All American Aviation, the nation's only air pickup operator, gave the results of its more than four years of service and submitted a voluminous statement, supported with charts and statistics, on that operation. H. H. Bailey, president, declared that by air pickup, the government "almost overnight" could extend benefits of direct air mail service to "every peak and corner of the country."

Studies show, he added, that it can be practically adapted to a combination passenger and pickup service on relatively short routes. Bailey urged that development of short haul and local transportation be left to independent operators, with airline partners "under no circumstances" permitted to operate air transport lines. Harry Stringer, All American's traffic vice-president and Austin McEntarmer, secretary, also testified. They urged permitting right flying of pickup routes.

Economic Stability—Bern Solomon, Northeast's president, was one of those who stressed the need for economic stability of prospective carriers. While he would not preclude other carriers from operating in Northeast's territory if need for the service could be justified, he said, he would reserve the right to prove that his own line was better equipped to operate those routes.

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PERSONNEL



has a background of specialized experience in transportation management and industrial personnel.

C. George Evans, personnel director of Air Associates, Inc., is serving as a panel member of the requested war labor board in Region 2, Trenton, N. J. Evans was once personnel manager for American Export Lines.

Comdr Donald J. Brown, Jr., USNR (center), has been detached in kind of the Ground Training Section, and has been assigned duty in the Pacific. His relief as head of the section is Comdr F. A. Conners, USN.



GIBSON, GLIDER TYCOON:

Roscoe Waring, national commander of the American Legion, (left) recently visited Gibson Refrigerator Co., where he was shown the company's plant, concerned as Waco glider production by its head, Frank S. Gibson, Jr. The Gibson Company delivered a complete glider to the AAF in less than six weeks after its last electric refrigerator rolled off the production line.

Lt. Colonel B. O'Brien, USNR, is on duty as assistant to Deputy Chief of Naval Operations (Air). Vice-Adm John J. McCain, USN (viewer).

Lt. Col. Henry Peck, USNR, film star, has reported his temporary duty in the Aviation Training Division.

Robert Aikens, director of airways and airports for American Airlines, has resigned. He is succeeded by his former assistant, Glenn E. Meier.

McMahan Cited

The Assistant Secretary of War for Air, Robert A. Lavett, has presented the air medal to Maj. Richard A. McMahan, whose husband, former Congressional Valiant flight supervisor, was killed May 19 in a plane crash near San Diego. The medal was awarded in honor of McMahan's survey of the flight route to Australia, now being flown by Convair for the Army.

The citation read: "For exceptional seamanship achievement in aerial flight from April 3 to April 9, 1942."



the company and the United States Army. At the time of his flight, which encompassed approximately 14,000 miles entirely over water, authorities estimating the route was very rugged. Landing fields on some of the intermediate islands were still in process of construction and radio facilities had not been established. The flight was made through a combat zone at a time when Allied Air forces were endeavoring to halt the remaining Japanese advance with inadequate air power. His successful completion was a major contribution to the war effort in that it proved the feasibility of speedy delivery of critical war cargo, combat replacement crews and high priority passengers."

H. K. L'Esperance has joined Russell Airways as employment manager. For the past two years, he has been Professor of Business Administration at the University of Western Ontario and



SOUTH AFRICAN TAXI:

Thomas G. Roberts, former Washington-operations agent for American Airlines, now first lieutenant in the AAF, traces out a native taxi driver's stunts, somewhere in South Africa. American doesn't ask whether the matter was hidden under the hood.

in recognition of having been the first man to purchase safely down a disabled plane. Col. Harold H. Rhone of the Air Transport Command was designated "Caterpillar No. 7" and presented with a plaque commemorating his jump from a plane on Oct. 20, 1932, at a turbulent dinner held at the Wagon Club in New York, last week. In presenting the plaque, Capt. Stanley Smith, acting partner of the Seattle Peninsula Co., told of the early formation of the Caterpillar Club following the historic jump of (then) Lt. Harris at McCook Field, Dayton.

W. G. Nelson has joined Flightways as assistant to Russell E. Dall, chief administrative manager. Nelson formerly was with Sperry Gyroscope Co.

Capt. William A. Womack, master of ocean flying boats, who has been com-



manding the Gibson Clippers on the Trans-Alaska route since 1939, recently completed ten years of flying for Pan American Airways. Now using his 170-lb bag book, Womack has 14,000 hours of flying to his credit. Capt. Womack entered the aviation scene as the Army Signal Corps pilot in 1917, and, during his years as an Army aviation instructor, guided several famous flyers for training, among them: Charles A. Lindbergh, Robert Park, assistant chief pilot of Pan American's eastern division and Eugene Proulx, former chief pilot of United Air Lines, now flying a military transport plane.

In his many years in aviation, Womack has been with the Philadelphia Rapid Transit Co., then the only passenger-carrying aircraft airline not operated by the government, was manager of Roosevelt Field, N. Y., and an assistant inspector for the U. S. Dept. of Commerce. He joined the western division of Pan American in 1923, when that section was developing instrument flying for use on routes through Mexico to Central America. He took command of flying boats operating in the Caribbean area and South America and then transferred to the Pacific to become a master of flying boats and to command a trans-Pacific Clipper. He joined the Atlantic division shortly after transatlantic crossings were started.

H. G. Andrews, veteran TWA pilot, has been named assistant superintendent of the Western division, adding J. S. Bartles. He will be based at Alhambra, Calif.

Western Division. The Western Division was recently created in a general reorganization, announced by the airline.

By W. Wells, TWA Eastern Division chief pilot since April, 1943, has been named representative of the newly created Eastern Division, in charge of all operations between Chicago and Kansas, and Amherst and Albuquerque including Indianapolis, St. Louis, Kansas City, Wichita, and



Amherst. He joined TWA in 1935 as a pilot. He graduated from Kelly Field and served in Army Air Forces in the Orient.

Col. Lawrence G. Peck, of the Army Air Corps, pilot of the first land of aerial in commercial service, and on leave from TWA, has been awarded the Air Medal for "extraordinary achievement while participating in aerial duty." He was former operations vice-president of TWA with more than 1,500,000 miles to his credit. As chief of operations for the Air Transport Corporation, Col. Peck volunteered to fly new type air-



P-38 PROJECT OFFICER HONORED:

Col. Alden B. Crawford, Materiel Command chief of staff, gave the Distinguished Service Medal ribbon as Col. Benjamin S. Kelsey, project officer for the Lockheed Lightning P-38, at Wright Field ceremony. Other award recipients were: Capt. Richard B. Johnson, Oak Leaf Cluster for his fighter pilot achievements at Guadalcanal, and Lt. Col. Barron C. Powers, officer's degree, Legion of Merit, for photographic work in the African campaign.

craft and check performance details over the North Atlantic Wing last winter, under the most severe icing conditions. His criteria recognized the invaluable information he collected on these trips.

Comdr J. M. USNR, after an extended tour of duty in the Air Technical Analysis Division, has been assigned to duty with the U. S. Naval air staff in London.

Comdr S. H. Warner, (naval aviator, retired), head of the Flight Statistics Section, has been promoted to the temporary rank of captain.

Maj. Alphon E. Bonaparte is setting chief of the Army's glider division. He was chief of the production and engineering division under the late Richard C. du Pont who was Gen. Ainslie's special assistant on gliders. Maj. Bonaparte was with Eastern Air Lines before joining the Army.

S. H. Wade, veteran member of the Knott organization, has been appointed assistant to S. D. Packery, chief operations manager of Packery-Wade went to Bristol from Corpus Christi, Tex., where he served as travel manager for construction of the Naval Air Base.



AMERICAN OPENS PERSONNEL OFFICE:

American Airlines has set up a street-level office in New York to receive applications from "anyone who wants a job and believes he can serve the war effort in a commercial aviation company." In Park Square Building, 195 East 43rd Street, the office is headed by (left to right): H. Proffer, assistant personnel director; Miss H. Seibel and Miss A. S. Field, interviewers; W. H. Baker, manager of the new office, and M. K. Miller, office manager of personnel.

United and American Export Back Conflicting Foreign Route Policies

W. A. Patterson letter to CAB urges single company operation of international line; Coverdale cites need of free competition under government regulation.

By MERLIN MUCKLE

The controversy over whether one company or several shall fly international routes was intensified last week when a domestic carrier—United Air Lines—came out in favor of one-line international operation, while American Export Airlines, already flying the ocean, supported the free and open competition recommended by 16 domestic airlines.

The paradoxical situation burst on the public when W. A. Patterson, United's president, revealed the text of a letter he had written the Civil Aeronautics Board, and American Export called the press in to hear a statement by W. H. Coverdale, president and chairman of its board.

Free Competition as Wise Rule.—The fruits of labor by Coverdale's search staff—largely possessed by a domestic airline—were evident throughout Patterson's letter, in which he cited the history of surface traffic across the Atlantic, said 14 domestic airlines were able to furnish to handle the passenger traffic market in 1948, and argued that the free competition proposed by other domestic airlines would be "destructive." He proposed legislation, in fact, to prevent international flying by individual domestic airlines.

American Export, on the other hand, supported the idea of "regulated competition" consistent with the Civil Aeronautics Act, and opposed monopoly or governmental control. Rose, a spokesman said, it will "in all probability" sign the policy statement of the domestic airlines.

United May Fly.—It was obvious that United, which has refused to sign the statement, is thinking about much the same line as Pan American Airways, also a non-runner, although it admitted frankly in Patterson's letter that if government policy determines that applications in the international field by domestic

carriers are acceptable and "to be encouraged," it will protect its standing and prestige by filing the service between the United States and Europe, and eventually across

the Pacific. The letter, in fact, gave notice of intention to file for such routes if it becomes CAB policy to permit individual domestic airlines to enter the transoceanic field. **American Export's Stand.**—American Export's statement, on the other hand, in advocating the "thesis of competition," argued for the right of any American flag airline to apply to the CAB for foreign routes, contending that public hearings should be held, and expressed willingness to leave it up to the judgment of the President and the board as to the number of companies that might receive certificates to operate approximately 30,000 miles of American Export's airplanes that not all domestic lines can be international operations as a valid argument that perhaps the longer lines to do this work are American Export and its such rival, Pan American—two



PAA USING TRIPLE-CONTROL GRUMMANS

Not all Grummans are fighting Japs. These recent photos show one of the Pan American Airways fleet of specially equipped Grumman Avengers, used as part of the training program for future transoceanic pilots. The interior shot shows seating arrangement of pilot and one of the students and the third control panel at left. The pictures were taken at PAA's Atlantic Division Marine base on Long Island, although similar shots are in use at other divisions.



would preserve the competition idea—while the domestic operators might better expand their activities in their own backyards.

Asks Regulations.—"Regulated competition," Coverdale declared, "as opposed to monopoly—combined with private ownership—and with adequate government and public support will enable U. S. aviation to secure for America its rightful share of the air commerce of the world in the postwar period."

Privately it was said that American Export has held this view since before the other airlines met to issue the policy statement. The line had little notice of the meeting, however, and has withheld its own announcement pending a thorough study.



NORTHWEST'S NEW MODIFICATION CENTER

Eight large hangars, with connecting shops and office buildings form the main unit of Northwest Airlines' new Verdale, Colo., modification center. Four of the hangars are shown above, with their modern version of the old double barn doors. The tail openings above are built to permit entrance of these superliners which are on the way.

Oceanic Air Traffic Won't Permit Stiff Competition, Patterson Says

Recommends legislation to forbid most lines from entering over-water service; says cooperative action may be best.

W. A. Patterson, president of United Air Lines, has reported to the Civil Aeronautics Board that after thorough study of international air traffic possibilities, United cannot see how the limited market that may be expected to develop can support the open competition advocated by other domestic airlines.

Recommending legislation to prevent individual domestic airlines from entering the international transoceanic field, Patterson concluded that "better individual airlines now in the domestic field not individual ownership companies can expect to extend their present operations into transoceanic air service without destructive results."

Country's Best Interest.—He declared it is "unwise for private enterprise to take a position opposed to joint or cooperative international operation if in that way our country's interest can best be served." United Air Lines will not be placed in such a position. Conceivably, he said, a proposal might come that one or more "chosen instruments" be employed to preserve the United States flag position in world air trade. But that aim must be achieved without government ownership or participation in ownership.

Despite the stand expounded in his letter, he wound it up by stating that to "protect the standing and prestige of our company" United will apply for permission to fly the Atlantic and the Pacific "if the poli-

cy of our government should be such that applications of domestic air carriers to enter the international transoceanic field are acceptable and are to be encouraged."

Solemon Replies.—His statement, considered an answer to the policy study taken last summer by the 16 domestic airlines for free competition for world service, brought an immediate rebuke from Chairman Sam Solemon of the Airlines Committee at United States Air Policy.

Solemon pointed out that United operates one of the largest United States lines and has recently acquired a Mexican line (Lamson), and said Patterson's request for a law to keep American domestic lines from the international field was "no more than a statement of his own unwillingness to compete." Declaring United was "walking the tightrope of self-interest," Solemon said "life here never lived on an individual or a company basis, but the United States is deep roots in competitors and in the same breath declare it is going to seek these rights itself."

Human Figure.—Patterson looked somewhat like a statistician expected record of the history of surface transportation across the Atlantic.

There now exist seven potential foreign competitors, he said, all single chosen instruments. Of these, Great Britain, Canada, France, Germany and Russia own five, while

Holland and Sweden control the other two.

Future North Atlantic air passenger traffic was estimated as follows:

Annual Traffic	West Coast		East Coast	
	1948	1950	1948	1950
1948	1,000,000	1,200,000	1,000,000	1,200,000
1950	1,200,000	1,400,000	1,200,000	1,400,000

Proper Craft.—Patterson concluded the proper airplane from economy and safety standpoints for the potential North Atlantic market should be able to fly 3,500 miles non-stop, carrying 300 passengers and approximately 3,000 pounds of mail and cargo.

United's calculations indicate that 18 such planes would be required to handle the market for 1948 and 33 for 1950, based on their requirements of 10 airplanes a week in the month. And for right month of the year, only a third of the peak would be required.

Distribute Schedules.—As to foreign competition, United's president and it could be assumed that equal distribution of schedules would be demanded. "All British reports on the subject indicate much to be there," said, and distribution equally could be expected under Atlantic Charter philosophy.

But "the 48 airplanes needed to serve a possible 1948 demand, distributed equally among seven foreign countries and the U. S. A., would result in six airplanes for each country. If more than one U. S. company is to participate in the U. S. share of the North Atlantic competition, no one U. S. company could be an outstanding success in view of such a narrow market without completely running its U. S.

competitors, unless such competitors received a very heavy public subsidy to insure survival."

Stassen, quoted British interests suggesting the pooling of resources by an intra rather than single operation to obtain "optimum size of air operating organization."

Who Should Participate?—While United had crunched the same numbers, Pattison said, "we cannot agree that steamship interests should exclusively make up such pooling. It may be that both steamship and airline interests should participate." He declared that the CAR must expect strong public protest "if any domestic air carrier is given an unfair advantage in the transoceanic field," which he contended should be considered entirely separate from the domestic. "If a chaotic condition should be permitted to exist where-by all those entitled to equal rights were granted them, we can visualize the creation of some eight to 10 additional operators whom, added to the foreign competitors, would result in approximately 22 companies competing to do a job that would require only 45 airplanes even five years from now."

Traffic Will Exceed Estimates?—Solomon's committee took issue with United's conclusions on the trans-Atlantic traffic potential and the future of air travel generally outside the United States. "The committee believes," Solomon stated, "travel will exceed any of the projections yet made."

Efforts Will Exceed Estimates?—Solomon's committee took issue with United's conclusions on the trans-Atlantic traffic potential and the future of air travel generally outside the United States. "The committee believes," Solomon stated, "travel will exceed any of the projections yet made."



AMERICAN OPENS TORONTO OFFICE

American Canadian and American officials at the opening of American Airlines' new city office in Toronto recently were (left to right) Air Vice Marshal Frank McNair, T. P. Gould, manager of route matters and ticket office of American, J. F. Robinson, American's Canadian traffic manager, H. J. Lantz, the company's eastern traffic manager, Mayor F. J. Cuddy of Toronto.

Mechanics' Wages Hit Stalemate

National Railway Labor Panel chooses term down plan for higher pay

Efforts by twelve airlines and representatives of their labor organizations to obtain wage increases for their mechanics appeared to be sidetracked last week. Meanwhile, mechanics were being situated to other fields.

All lines except Panagra and Hawaiian were represented at a meeting with Dr. William Leiserson, chairman of the National Railway Labor Panel, who has turned down the applications for adjustments.

Wages at Ceiling?—Leiserson was sympathetic, but maintained he was precluded from granting the requests by the President's hold-the-line order. Mechanics' wages now have reached the 11 percent increase above Jan. 1, 1943, depending on the type of work under the various mechanics' and related classifications. The general practice now is to pay time and a half for hours in excess of eight each day. After hours, 44-hr. week, work, straight time is twice of 40 hrs.

There has been talk of reducing the number of job classifications for maintenance and related activities—there are now 96—and a new standard, if approved, might involve some increases, though Leiserson seems to not anticipate these would be substantial.

Low Wage Earners Hit?—The worst of the present situation is that people in the lowest wage brackets are the ones affected, and the inability to raise wages has meant the loss of considerable manpower to other industry, a turnover the lines seek to halt.



for time and a half over a 40-hr. week, doubt was expressed that such a step will be taken. Besides, there was no assurance it would bring approval. The airlines' committee is a 24-hour-a-day, 7-days-a-week industry, to which the 40-hr. week would not readily apply.

Later statements, made from year to year, very much with such company, Continental and United, to raise two examples, were not among the down lines who submitted new agreements to Dr. Leiserson, because their previous wage agreements are not expiring at this time. The applicants were American, American Express, Chicago and Southern, Colonial, Eastern, Island, Mid-Continent, National, Pan American, Pennsylvania-Central, TWA and United. Their agreements would affect 90 to 95 percent of the mechanics in the industry.

Rate of Increase?—They sought an upward adjustment averaging about 10 percent in hourly wages, which was from 34 cents to 45.45, depending on the type of work under the various mechanics' and related classifications. The general practice now is to pay time and a half for hours in excess of eight each day. After hours, 44-hr. week, work, straight time is twice of 40 hrs.

There has been talk of reducing the number of job classifications for maintenance and related activities—there are now 96—and a new standard, if approved, might involve some increases, though Leiserson seems to not anticipate these would be substantial.

ATA Forms 3 Groups To Tackle Problems

Development, economic and research committees organized

Three committees to discuss new problems in air transport are being formed by the Air Transport Association.

Airlines heads have been asked to submit nominations for a Committee on Airport Development Program and an Economic and Research Planning Committee. The former will deal with such subjects as airport serving and facilities, maintenance standards for runways, light-

equipment and the like, and airport design and construction standards. John Greer of the association, former manager of the Washington National Airport, will be secretary. **Economic Committee?**—The economic committee will include people doing research and planning for members, and will be aided by Dr. E. C. Sorrell, head of ATA's Economic Research and Planning Division.

A third new group, a special committee, will study the toll by Chairman Len (D-Cald.) of the House Interstate and Foreign Commerce Committee for disposition of surplus government aircraft and related material.

The measure (H. R. 3599) is understood to be favored in principle by association directors. Members of the new committee are P. M. Wilcox of United, chairman, L. W. Lawrence, TWA; William Littlewood, American; H. G. Lachet, Pennsylvania-Central; and S. L. Shannon, Eastern. Allen W. Dallas, who joined ATA recently as engineering and maintenance liaison man, will be secretary.

Need for Separate Air Department Cited

Formation of strong U.S. group urged by Grover Loening, "with aircraft conscience"

With applications on file for nearly twice as many trans-oceanic routes as there is railroad mileage in the United States, the country should use the breathing spell given civil aeronautics by the war to create a "household recognized commercial organization" to cope with postwar problems of the air industry.

This is the opinion of Grover Loening, ATA aircraft consultant, given before the Traffic Club of New York. He suggested a Civil Aeronautics Department, with a Secretary of War, as the answer—a step he said should have been taken long ago, but even now apparently is nowhere near accomplishment. The establishment of such a department, he added, would not hurt the war effort but would, in fact, help it.

Unfree Free Competition?—Calling for competition, rather than monopoly, in the domestic and the international field, he wanted that "granting of private initiative does not carry with it the warrant for totalitarian private greed. Far better will it be for us, particularly in aviation, to have a slightly less



CONTINENTAL'S ATC OVERSEER:

R. H. Weaver, Continental Air Lines' vice-president of operations, has charge of its work for the Air Transport Commission, which puts it on one of the country's big war jobs, although it ranks as one of the smaller airlines. One of those operations is the conduct of a domestic contract air corps division, which it flies for the ATC on a daily transcontinental basis. Weaver also is charged with the test flying of B-27 Flying Fortress that come out of Continental's modification center at Denver.

commercial air transport system that may cost us a little but more in subsidies, but that has preserved less competition—because we will more than recover such added cost by the insulating and developing of clever American ingenuity."

He qualified, however, against "letting any of our units get too big, but we will end up by having our private enterprise spirit entirely," and suggested that a basis might be established some figure of gross earnings at which any one airline has grown enough.

Post-War Cargo Problems?—Discussing after-the-war cargo possibilities, Loening asserted that if the aircraft industry ends after the war a fifth as large as the automobile industry was before the war—it is more than five times as large now—it will need to find a cargo carrying business of around 30 billion ton miles a year, or 5 percent of the total railroad ton mile movement.

That need put more the \$30,000,000 railroad industry," he said, "because a large proportion of this history, according to the course that history shows such transport movement taken, will be entirely new

business and might not be taken away from the railroads at all." Too, the question of aviation gasoline is "a very serious headache" in the air future.

Surprises Coming?—Some surprises are due in the domestic field after the war. Phases may operate from New York to Washington, for example, not on fixed schedules, "but exactly as traffic may need to be carried to the airport to get a ride to Washington and thereby take the rest plane leaving on five or ten minute holdways." And the development of the glider and air pickup by low plane and visit implications for cargo carrying, he declared.

Lower Costs?—"Present" cargo planes on carry loads at railroad express rates of around 10 to 15¢ a ton mile, and make a profit, and when we add the new developments which are certain to come in the next five or ten years, we will see these costs down to three or four cents a ton mile," he said.

"This then will invade the trucking field and equal the LCA freight costs. But it will take a long time to get down to the low cost of shipping by ship. Some of us have been disappointed on this score."

Forecasting for Aviation

WE ARE about to be entering a cycle of shrunken estimates for the future of international air transport. We passed through the stage in which popular writers pictured our merchant fleets resting at their docks, under the shuttling shadows of massive aircraft carrying the world's commerce. Then came the era in which everyone decided that shipping and the railroads would survive, and might even show some gains.

Now an announcement from United Air Lines' President Peterson describes "the relatively narrow air travel market" as small as the North Atlantic after the war, which will hardly keep 43 planes busy by 1948, divided among eight countries with air operation ambitions. The planes, however, are identified as 100-passenger models, which we aren't really likely to have by 1948. The largest craft until then will be the 50-passenger DC-4, which on a long, luxury hop to London may carry half that number of passengers.

The CAA recently in a careful study decided that a maximum of 235 planes of 20 to 25 passenger capacity could fly all the overseas first class mail which was carried by sea between the U. S. and the rest of the world just before the war.

Even with proper respect for past statistics, service potentials and competent computations, may we ask who forecast even the possibility of our airlines, with half of their planes taken from them, being able to raise passenger load factors to 80 percent or more, fly express poundage gains of well over 100 percent, fly as much mail as they ever had, and operate each plane 1,625 miles a day instead of 1,070?

And who could have forecast even the physical

possibility of our attaining within two years an output of 15,000 transport planes a year even under war stress? Furthermore, who forecast that in the same time we could possibly build up under the greatest urgency an Army Air Transport Command network of 16,000 route miles and a Naval airline of 50,000?

Furthermore, no matter how unscientific may it be, we are not going to drop back to 1941 "normal" traffic, on which so many forecasts are being based. Such a base is probably scientific and mathematically justifiable. But it fails to take account of any sweeping changes in our social and business life.

The automobile revolutionized American community and national life. Imagine how wrong the most optimistically-minded prophet for the automobile would have been about 1910 if he had computed a forecast of auto traffic for the next 25 years on the basis of the number of passengers (or passenger miles) carried by the horse and buggy in the 20 years up to 1910.

Aviation is revolutionizing transportation all over again. The war has accelerated the process. Like the automobile, aviation will knock previous statistics away because it will change the world's travel and business habits. The public pressure will force traffic expansion far beyond 1941 levels. This will be true whether all laws are self-sufficient at the start or not. Much new traffic cannot be charted now. Already in its short history aviation has had a habit of upsetting its prophets and it won't start settling down for some time yet. This isn't scientific but aviation growth never has been. That may explain why many of today's computed forecasts will sound strange in a decade or two.

The AAF on Tour

THE MATERIAL COMMAND's big section of the Army's recent "Back the Attack" Exhibition on the Washington Monument grounds in Washington should tour the country.

This Army Air Forces project (and that of the Air Service Command, Airborne Engineer Corps, and AAF Medical Corps) walked away with the show, although Army Ground Forces also participated. A Liberator, six latest fighters, a big glider, training planes, engines and smaller exhibits drew huge crowds. So did the Zero and Messerschmitt.

The public is starved for aviation events. Private flying barely exists. Commercial airports have lost much luster with sharp decrease in airline transportation. Visits to the lively military air bases are forbidden. Because of priorities and heavy traffic most persons feel they cannot even buy a ride in an airplane.

Of course, the public shouldn't need to be "high

pressed" to buy bonds. But the inclement heritage of much dull "Buy Bonds" propaganda proves the government realizes the people must be persuaded. And it's true the AAF show would represent some expense and require the time of a small group of men. But so do the countless "Buy Bonds" movie shows, billboards, ads and radio scripts. And what about the big casts of the moving military show. This is The Army (later made a movie) and The Army Play By Play? They helped sell Army Bonds. Fans enormously.

More than 530,000 persons saw a small Material Command Exhibit in Chicago in four weeks in a space hardly 70 x 70. The big Washington show attracted nearly 100,000 in one day alone. Aviation's public is the most responsive in the world. The AAF's War Bond Road Show would be an important spur to the war effort.

ROBERT H. WOOD



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